

## Ryozo WATANABE\*: Notes on Japanese mosses (3)

渡辺良象\*: 日本産蘚類報告 (3)

5) ***Thuidium uliginosum*** Card. in Bull. Soc. Genève, **3**: 283 (1911); Brotherus in Engler u. Prantl, Nat. Pfl.-Fam. **1** (3): 326 (1925); E. Iishiba, Nippon-Senrui-Sosetsu **199** (1929); K. Sakurai in Bot. Mag. Tokyo **60**: 93 (1947); Musc. Jap. **127** (1954). (Fig. 1)

*Thuidium obtusifolium* Warnst., Hedw. **57**: 111 (1916); *Thuidium glaucinum* (Mitt.) sensu Reimers et Sakurai, Bot. Jahrb. **54**: 5,594 (1931).

Dioecious. Plants large, brownish green or yellowish brown, stems about 7–10 cm long, ascending or erect, branches few, branching pinnate, paraphyllia multiform, stem leaves, small and distant in lower part of stem, larger toward summit, lower leaves cordate, upper leaves ovate-lanceolate, gradually acuminate, incurved, serrulate, about 1.6–1.8 mm long, 0.8–1.0 mm wide, costa stout extending at least  $3/4$  the length of the leaf, median leaf cells rather thick-walled, ovate to oblong, about  $17\mu$  in diam., obscure, pluripapillate (3–6), branch leaves broadly ovate-acuminate, concave, serrulate, costa strong, extending at least  $3/4$  the length of the leaf, median leaf cells rounded to oblong-quadrate, about  $15\text{--}17\mu$  in diam., rather thick-walled, pluripapillate (3–6). Perichaetial leaves erect or curved in apex, long filiform-acuminate, border smooth about 3.5–4.0 mm long, 0.25–0.52 mm wide, costa ending below the apex, not ciliate, cells of median part vermiculate, about  $6.5\text{--}8.7\times 40\text{--}60\mu$ , unipapillate or pluripapillate. Seta erecta smooth, about 2–2.5 cm long and 0.3–0.32 mm in diam. at base, when dry sometimes slightly curved, reddish-brown. Operculum conical, inclined, dirty-brown, not lustrous, about 1.0 mm. Capsules conic-rostrate, wrinkled when dry, yellowish-brown, not shining, about 2.0 mm long and 1.0 mm wide, cells ovoid, smooth, thick-walled. Outer peristome teeth about stout narrow-lanceolate, about 0.81–0.85 mm long and 0.16 mm wide at base, yellowish-brown, papillose in upper parts, becoming hyaline at tip, inner peristome yellowish, of equal length with outer teeth, basal membrane high more than  $1/2$  of the outer teeth, cilia one or two, smooth. Spores yellowish, globose, papillose, about  $23\mu$  in diam.

Specim. exam., Honshu: Aomori pref., Towada (U. Mizushima, Musc. Jap. Exsic. 8,398), Miyagi pref., Miyagi-gun Shirasawa, alt. ca 550 mm (R. Watanabe

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nos. 2651, 3215), Fukushima pref., Aizu-Wakamatsu city, Akaiyachi-moor, alt. ca 500 m (R. Watanabe no. 766), Oonuma-gun, Kanayama-mura, alt. ca 800 m (T. Higuchi-R. Watanabe no. 1617), Shinobu-gun, Iizaka-machi, Anabara-spa, alt. ca 250 m (R. Watanabe no. 1724), Nishishirakawa-gun, Higashi-mura, Kakuuchi, alt. ca 250 m (R. Watanabe nos. 1412, 1851, 1914), Ishiki-gun, Shimoogawago-Ogawago, alt. ca 100 m (R. Watanabe nos. 2886, 2890), Ibaraki pref., Mt. Tsukuba (Sh. Ono-K.

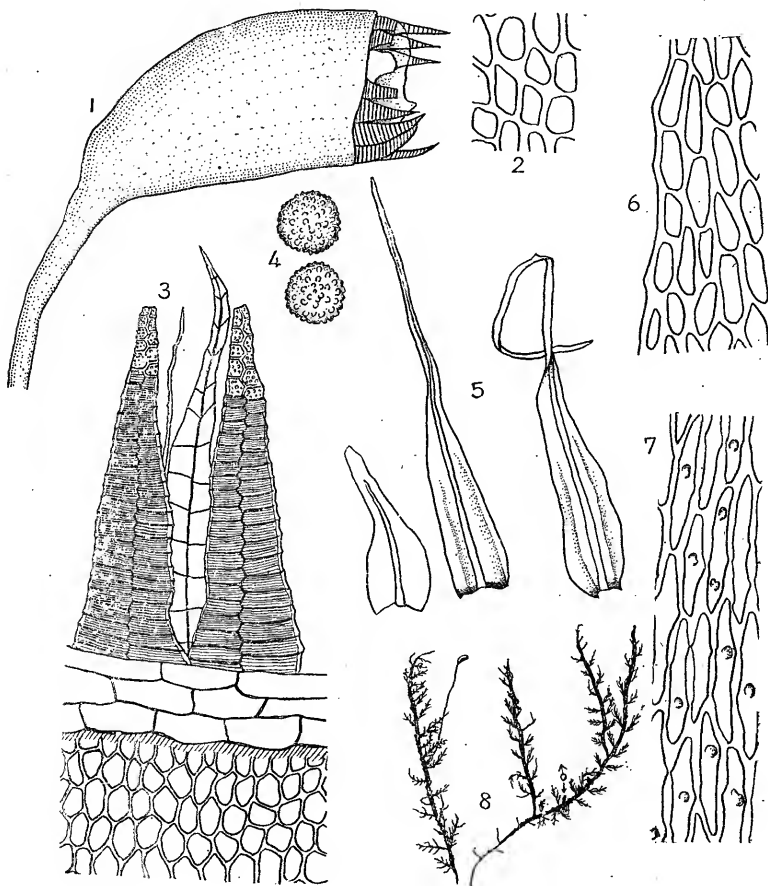


Fig. 1. *Thuidium uliginosum* Card. 1. Capsule  $\times 14$ . 2. Cells from middle of capsule  $\times 14$ . 3. Peristome and exothecial cells  $\times 90$ . 4. Spores  $\times 300$ . 5. Perichaetial bract  $\times 14$ . 6. Apical margin of perichaetial bract  $\times 300$ . 7. Cells from middle of perichaetial bract  $\times 30$ . 8. Plants  $\times 1/2$ .

Sakurai no. 483), Gunma pref., Tatebayashi city, Kondonuma (Yoshida no. 24, labelled as *Thuidium yoshidae* Sak.), Tokyo (K. Sakurai no. 24, types of *Thuidium obtusifolium* Warnst.), Nagano pref., Oiwake (K. Takano-K. Sakurai no. 14965, labelled as *Thuidium obtusifolium* Warnst.), Mie pref., Miyamoto-mura (T. Mago-fuku no. 1143-K. Sakurai no. 10009, labelled as *Thuidium obtusifolium* Warnst.).

Range—Japan and Korea; type locality: Pomasa in Korea.

Ecological notes—Usually on damp soil; *Sphagnum*-moors, occasionally on the path of rice fields or among rocks and sand by stream. Associated species observed are *Sphagnum medium*, *Sphagnum subsecundum*, *Thuidium tetracadioides*, *Philonotis fontana*, *Calliergonella cuspidatum*, *Carex* spp., *Circium hilgendorfi*, etc.

The present species was established by Cardot based only on sterile material, and his description was very simple and had no figure, so that I add here the accounts of this plant. The description is based on my specimen no. 1724. In Japan, this species is usually sterile. So far as I know, only the material collected by me at Anabara-spring, Iizawa-machi, Shinobu-gun in Fukushima prefecture was fructiferous. In 1916, Warnstorf established *Thuidium obtusifolium*, based on a specimen from Japan. Afterward Reimers and K. Sakurai (1931) reduced this species to a synonym of *Thuidium glaucinum*. Most recently, I have examined the type specimen of *Thuidium obtusifolium* and several specimens reported by Reimer & Sakurai in 1931. I think that these specimens all belong to *Thuidium uliginosum*.

6) ***Thuidium perpapillosum*** R. Watanabe sy. nov. (Fig. 2).`

*Thuidium micropteris* Besch. sensu T. Higuchi, in Journ. Jap. Bot. 28: 189 (1953).

*Thuidium higuchii* K. Sakurai msc. *Thuidium minutissima* K. Sakurai msc.

Plantae minutissimae, virides, laxae caespitosae. Caulis longus, flexuosus, ca. 0.1 mm crassus, 1–2.5 cm longus, radiculosus, laxe foliosus, dense subpinnatim ramosus, papillis numerosis; ramis patentibus, ca. 2–2.5 mm longis, densiuscule foliosis, parce vel sub-pinnatim ramosis, apice obtusis, papillis numerosis. Folia caulina breviuscula lanceolato-acuminata saepe reflexa, paulum concava ca. 0.3–0.35 × 0.2–0.22 mm, marginibus erectis, saepe medio recurvis, ubique mammoso-dentatis, costis validis, ad 3/4 folii productis, basi ca. 28–32  $\mu$  latis, pellucidis, cellulis folii haud pellucidis pentagonis vel quadrangularibus, pluripapillosis (2–4), parietibus crassis medio ca. 5–8 × 10–12  $\mu$  in diam, basilaris laxae, elongato-hexagonis. Folia

ramea, elongato-ovata vel elongato-triangularia, ca  $0.14 \times 0.21$  mm, marginibus erectis, saepe medio recurvis, ubique mamilloso-dentatis, costis, validis, infra apicem folii evanidis, pellucidis, cellulis haud pellucidis, quadrangularibus, pluri-papillois

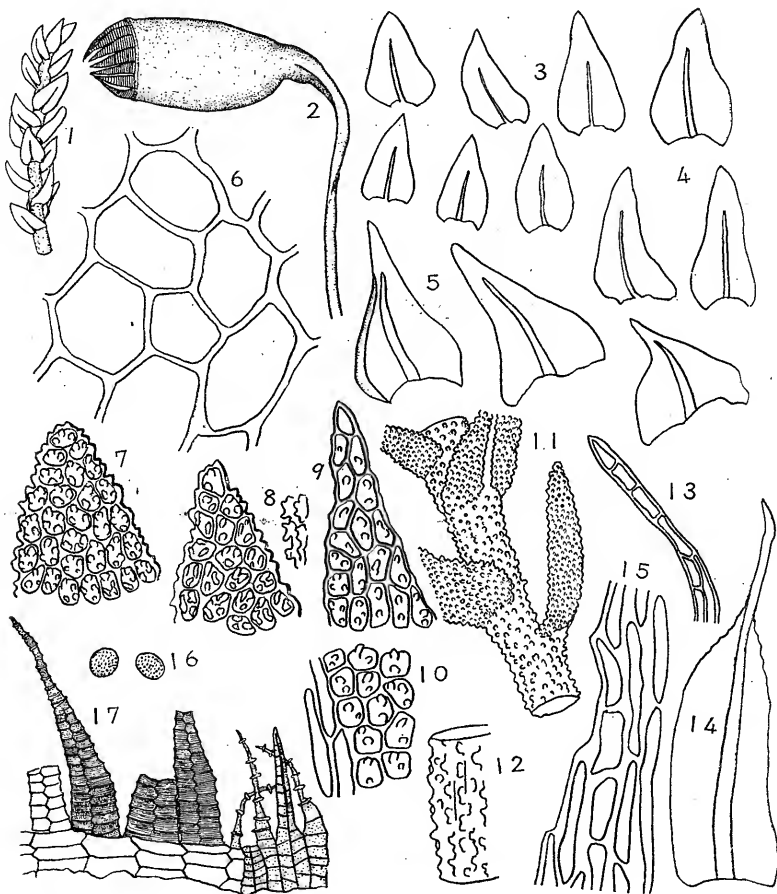


Fig. 2. *Thuidium perpapillosum* R. Watanabe.

1. Part of branch  $\times 35$ . 2. Capsules  $\times 14$ . 3. Branchlet leaves  $\times 75$ . 4. Branch leaves  $\times 75$ . 5. Stem leaves  $\times 75$ . 6. Cells from middle of capsule  $\times 300$ .
7. Apical part of branchlet leaf  $\times 300$ . 8. Apical part of branch leaf  $\times 300$ .
9. Apical part of stem leaf  $\times 300$ . 10. Cells from middle of stem leaf  $\times 300$ .
11. Part of branchlet  $\times 140$ . 12. Part of stem  $\times 300$ . 13. Apical part of perichaetial bract  $\times 140$ .
14. perichaetial bract  $\times 30$ . 15. Apical margin of perichaetial bract  $\times 300$ . 16. Spores  $\times 300$ . 17. Peristomes  $\times 75$ .

(2-6), parietibus crassis, medio ca  $7-9 \times 11-13 \mu$  in diam. Bracteeae perichaetii internae lanceolato-oblongae, concavae, marginibus superne crenatis, cetera levibus, costis validis longissimis peliferis productis. Seta recta, rufescens ca 12 mm longa et 0.11 mm crassa, laevis, vaginula cylindrica ca 0.8 mm alta, laevis. Theca horizontalis, oblonga, sicca curvatula, rufescens, blandis, ca 1.4 mm longa et 0.8 mm crassa, cellulis hexagonis ca  $30-40 \times 40-50 \mu$ . Operculum e basi conica longissime arcuato-rostratum, blandum, ca 0.7 mm longum. Peristomii, duplices, exostomii dentes lanceolati, attenuati, ca 0.41 mm longi, inferne dense striolati, superne minute papilloso, dense lamellosi, lamellis altis, endostomium luteum, minute papillosum, corona basilaris alta, processu lineari-lanceolati, carinati, ca 0.3 mm longi, cilia longa. Sporae globosae, papillosoe ca  $10 \mu$  in diam.

Specim. exam. Honshu: Iwate pref., Hienuki-gun, Yuguchi-mura (T. Higuchi no. 780, labelled as *Thuidium micropteris*), Fukushima pref., Shinobu-gun, Moniwa-mura (T. Higuchi no. 777, labelled as *Thuidium micropteris*, Oct. 16, 1952), Date-gun, Ryozen-machi, Ishido alt. ca 320 m (T. Higuchi no. 5981, labelled as *Thuidium higuchi* Sak., Sept. 16 1956), Hobara-machi, Hashirada (T. Higuchi no. 717, labelled as *Thuidium higuchi* Sack, March 27, 1950), Tamura-gun, Takine-machi, Irimizu alt. ca 510 m (R. Watanabe no. 1133-types in Herb. R. Watanabe, Sept. 11, 1955), Nishihirakawa-gun, Higashi-mura, Kabuuchi alt. ca 250 m (R. Watanabe no. 1846, June 17, 1957), Higashishirakawa-gun, Takenuki-mura (T. Higuchi no. 2128, labelled as *Thuidium minutissima* Sak., April 10, 1954), Ishikawa-gun, Asakawa-machi alt. ca 400 m (T. Higuchi no. 5728, July 15, 1956).

Ecological notes: This species is apparently rare, being known only from eight localities in north-eastern Japan. Of these, two are in calcareous areas, three are in granite areas in forest on lowlands below 430m, and others are in liparite areas in forest.

The new species is closely related to *Thuidium minutulum* in general appearance and it is hardly possible to distinguish the two by naked eyes. Microscopically, however, the present species may be distinguished by the following characters: numerous papillae occur on stems, branches and branchlets, the capsule is not strongly curved and, plicate when dry.

Most of the specimens examined are kept in the herbaria of Kyoritsu Pharmaceutical College of Tokyo and others in the private herbarium of Mr. T. Higuchi of Fukushima Agricultural High School.

5) ヤチシノブゴケ Cardot が朝鮮産の sterile 標本に基づいて設定した種であるが、現在まで子嚢をつけたものが発見されていないので子嚢についての記載はない。また Cardot の記載は簡単に図もない。今回私は福島県信夫郡飯坂町穴原温泉町附近の田圃のあぜ道から子嚢をつけた標本を採集することができたので、子嚢について図をそえて追記載を試みる。また、Warnstorf が 1916 年に *Thuidium obtusifolium* として Hedwigia に発表し、1931 年に桜井久一、Reimers 両博士によつて *Th. glaucinum* の Syn. とされたものはヤチシノブゴケである。

6) ヒグチシノブゴケ(新種) 従来イトシノブゴケと混同視されていたようであるが、樋口利雄氏発表の標本および私が採集した標本はイトシノブゴケと全く違うもので、茎および枝一面にパピラがあり今までにかようなものを知らない。その葉細胞の構造などは *Th. minutulum* に近いようであるが蘚菌などの形態が異なるので新種と認めて発表する(イトシノブゴケはチャボシノブゴケと同一種であることがわかったが、その事については後報にゆずる)。なお、和名は樋口氏を記念した名である。

終りにのぞみ常に御指導を賜わり標本の閲覧を快諾された桜井久一博士、本稿を御校閲下さった野口彰博士、貴重な標本を貸与され御高説を賜わつた服部新佐博士、岩月善之助氏、度々御無理な文献の借覧を許される水島うらら氏、常に研究標本を恵与される樋口利雄氏に深甚なる謝意を表する次第です。

○ウロコナズナ(水島正美) Masami MIZUSHIMA: *Lepidium campestre* R. Brown, a new alien in Cruciferae.

4 年程前に此のアブラナ科の渡来品を手にした。長野県更級郡篠井町(シノノイ)に繁殖しつつある由で、1953 年 6 月 13 日に峯村まさ夫人の採集にかかる。ヨーロッパ原産の 1~2 年草で高さ 30~50 cm あり、茎、葉、小花柄に開出乃至多少逆向する単毛(少量の 2 叉毛を混ずる)を密生して灰緑色に見え、少くとも茎上半部の葉は鋭頭の耳を以て茎を抱き、果実は広卵形、長さ 5~6 mm あり、向軸面が平坦で背軸面がふくれ、特に満面に白い細粒を布く点で他種と容易に区別出来る。本種は殆ど普遍種となっており、本邦でも既に採集されてはいたのであろうと想像する。花は細小で径約 2.5 mm、白瓣と黄葯とを持つているが、和名を果実の外見に取りウロコナズナ(新称)と定める。

(都立大学牧野標本館)